DIAGNOSIS OF AGE-RELATED CARDIOVASCULAR DISORDERS

SUMMARY

Researchers at the NIH, National Institute on Aging, Cardiovascular Biology Unit-Vascular Group have discovered a method for the diagnosis and prognosis of cardiovascular aging, and is seeking parties interested in in-licensing or collaborative research to co-develop, evaluate, or commercialize novel methods for diagnosing age-related cardiovascular disorders.

REFERENCE NUMBER

E-219-2008

PRODUCT TYPE

- Diagnostics
- Research Materials

COLLABORATION OPPORTUNITY

This invention is available for licensing and co-development.

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DESCRIPTION OF TECHNOLOGY

Researchers at the NIH National Institute on Aging have discovered a method for the diagnosis and prognosis of cardiovascular aging. Current methodologies include the measurement of patient lipid profiles or expression of up to two proteins. In contrast, this technology utilizes the expression levels of a panel of proteins not previously known to be related to cardiovascular aging. While the underlying cellular and molecular mechanisms of age-related vascular disease remain largely undefined, the expression levels of the genes, i.e., milk fat globule epidermal growth factor-8 (MFG-E8), described in this technology have been empirically determined to differ between healthy and age-inflamed arterial tissue. This invention may lead to the development of more accurate diagnostic or prognostic cardiovascular aging tests and may improve the accuracy of currently available tests when used in concert. Further, this technology includes a companion mass spectroscopic-based methodology for reproducible quantification of specific expression levels of interest.

Further R&D Needed:

- Study the roles of the panel of proteins in the development of hypertension, atherosclerosis, and arterial injury in vivo in animals
- Use the results of these studies to develop target strategies, i.e., a drug, antibody, or adenovirus to coat stents during angioplasty
- Test these target strategies in animal models and then in clinical trials
- Analyze other secreted proteins for their role in cardiovascular aging

POTENTIAL COMMERCIAL APPLICATIONS

- Tests for the diagnosis and prognosis of age-related vascular disorders
- Therapeutics for hypertension, atherosclerosis, and arterial injury

COMPETITIVE ADVANTAGES

- Ability to more accurately assess arterial aging and its risks for atherosclerosis and hypertension.
- Reproducible quantification of specific expression levels of interest

INVENTOR(S)

Edward Lakatta, M.D.

DEVELOPMENT STAGE

- Discovery (Lead Identification)

PATENT STATUS

- **Not Patented:** Technology will not be patented and is available as a Research Tool
- **Foreign Issued:** EP 2399131

THERAPEUTIC AREA

- Cardiovascular Systems